Clean Cities
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Alternative Fuel Information Series
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Clean Cities National Partner Awards

U.S. DEPARTMENT of ENERGY
OFFICE of ENERGY EFFICIENCY and RENEWABLE ENERGY

Clean Cities National Partner Awards

The Clean Cities Program of the U.S. Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy is proud to present the National Partner Awards, in recognition of outstanding efforts to promote alternative fuels and alternative fuel vehicles (AFVs). The recipients were inducted into the Clean Cities Hall of Fame at the 9th National Clean Cities Conference in May 2003.

Valley Metro Transit

Valley Metro, the regional transit system for metropolitan Phoenix, operates one of the nation's largest fleets of natural gas transit buses. The buses are owned by the City of Phoenix, City of Tempe, City of Mesa, City of Scottsdale, and the Regional Public Transportation Authority (RPTA). About 70% of the active fleet of 700 buses are fueled by natural gas. They use 8.5 million gallons of liquefied natural gas (LNG) and 900,000 gallons of compressed natural gas (CNG) annually.

Valley Metro LNG bus

Bob Rink, Phoenix Public Transit Dpt./PIX 12534

The City of Phoenix is also leading the way nationally with its order of 56 new technology composite framed buses fueled by LNG. In addition to carrying more passengers than a standard sized bus, these 45-foot vehicles weigh less, allowing for greater fuel efficiency.

With an increase in natural gas buses comes a need for more fueling stations. Phoenix recently added an LNG station and will expand one and build another in the next few years. The RPTA, Tempe, and Scottsdale are planning a joint LNG station for their fuel needs.

These members of Valley Metro have made significant commitments in alternative fuel infrastructure and natural gas buses that warrant their recognition as Clean Cities National Partners.

Washington Metropolitan Area Transit Authority

WMATA is committed to clearing the air in the Washington, D.C. area. The agency has adopted a long-term plan to convert much of its diesel bus fleet serving Washington, D.C., Virginia, and Maryland to natural gas. It has already purchased and placed in service 164 colorfully labeled CNG buses, and plans to have 564 in service by 2007. The agency renovated its D.C. garage and installed a CNG fueling station in 2002, and is now renovating a facility (which will also include a CNG fueling station) in Arlington, Virginia. This facility will begin dispensing natural gas by April 2005. WMATA is trying to time 250 future CNG bus procurements to coincide with its completion. A third facility (this one in Maryland) will be constructed by 2008. WMATA plans to modify other garage facilities for CNG as the need arises.

AFV Hero Award

Curtis Donaldson, CleanFUEL USA

Curtis Donaldson, managing director of CleanFUEL USA, strives to provide easy access propane stations in targeted metropolitan areas in the United States and abroad. CleanFUEL USA operates stations in Denver, Phoenix, central California, and two national parks. Four other cities will receive stations this year.

Clean Fueling Technologies/PIX 12533

Donaldson developed a Clean Cities Coalition Fuel Incentive Program that promotes infrastructure projects with Clean Cities coordinators. The program provides incentives to Clean Cities coalitions by paying them a royalty of about $0.025 for every gallon sold through a station. He also helped develop the pilot of the Ford Alternative Fuel Vehicle (AFV) Power Breakfast Meetings, which inform Texas metropolitan fleets about upcoming propane vehicles. He has also worked with Clean Cities International to build programs in India, Peru, and Mexico.

He was instrumental in providing infrastructure for the new Red Buses in Glacier National Park. A propane fueling station that fuels 23 buses stands at the park entrance. He developed a demonstration vehicle and customer solicitation best practices list to increase AFV sales. This list is being adopted by several coalitions. He works closely with dealerships to stock AFVs, and places advertisements in the local newspapers. He works with Ford to sponsor trade shows and actively builds relationships with local Ford AFV dealership fleet personnel.

Donaldson worked with the Crawford Ranch foreman and President Bush to place a 2002 Ford F250 Supercrew propane vehicle—dubbed Propane I—on Bush's ranch. It's a working truck, and the President uses it when he's on the ranch. And there's even a state-of-the-art propane fueling station on the ranch to ensure the President never runs out of fuel. The truck was featured at the Clean Cities Conference in the Ride-n-Drive in 2002 and 2003.

In addition to using alternative fuel buses, all of WMATA's diesel buses and maintenance trucks use ultra-low-sulfur diesel fuel, and a project is underway to replace engines in the 100 dirtiest buses with cleaner engines. The agency is in the process of retrofitting 618 diesel vehicles with diesel particulate filters. It is also testing an exhaust gas recirculation system on 25 buses for the U.S. Environmental Protection Agency, and in September will begin a synthetic fuel demonstration. And as if all this weren't enough, WMATA is putting bike racks on every bus to further encourage "alternative transportation."

Illinois Environmental Protection Agency

With the support of the Chicago Area Clean Cities Coalition, the Illinois EPA has established the Illinois Green Fleet Program in Springfield. It is a voluntary program for businesses, government, and other organizations to gain recognition and additional marketing opportunities for fleets that acquire vehicles that use natural gas, propane, E85, electricity, biodiesel, or other clean American fuels. Original equipment manufacturer vehicles and conversions qualify for the program. Twenty-six fleets—including the Chicago Transit Authority (natural gas); DuPage County (natural gas, propane, ethanol, biodiesel); the Illinois Corn Growers Association (ethanol); Illinois Power (natural gas, ethanol); the University of Illinois at Chicago (natural gas); and El Milagro (propane)—now support the Chicago area coalition in Illinois and are helping Missouri establish a similar program. About 20 more fleets are expected to be designated soon.

The Illinois EPA is launching two new programs—the Illinois Green Fuels and the Illinois Green Dealers—to complement its Illinois Green Fleets Program. The Illinois Green Fuels program recognizes retail or commercial fuel stations that sell E85, natural gas, propane, and biodiesel to the public or other fleets. The Illinois Green Dealers Program highlights and recognizes vehicle dealerships that provide training for their sales staff and maintenance technicians on how to sell and service natural gas, propane, E85, and electric vehicles. Only specialized dealerships that are certified by their respective manufacturers to sell and maintain the vehicles to satisfy all their customers' needs for "green vehicles" receive this designation. An elite group of Illinois dealerships qualify for the program and in 2003 will be designated along with the Illinois Green Fuels stations. Two adaptations of the Illinois Green Fleets logo will be used for the two programs to identify the stations that sell green fuels and the dealers that sell and service green vehicles for fleet customers and the public. The Illinois EPA has been innovative in its recognition of AFV supporters and successful in attracting new converts.

Sky Harbor Int'l. Airport/PIX 12535

Sky Harbor Int'l. Airport/PIX 12536

Left: Vehicle being fueled with CNG at Sky Harbor International Airport
Right: CNG dispenser at Sky Harbor International Airport

Sky Harbor International Airport

Sky Harbor International Airport, operated by the City of Phoenix-Aviation Department, has had the longest running public/private partnership with a CNG fuel provider in the United States. Started in 1993, this partnership has led to the construction of 2 of the nation's highest volume public access CNG fueling stations on airport property. It has instituted effective AFV policies that have helped displace more than 2 million gallons of gasoline annually, primarily from airport fleets. Clean Energy (formerly ENRG) partnered with Sky Harbor in 1994 to build a CNG fueling station for the airport's operations vehicles and to develop an adjacent public CNG facility to fuel SuperShuttle and others on the airport's west side. Then in 2000, Clean Energy partnered with the airport on a second public CNG station on the east side to fuel the interterminal buses and the airport taxi fleet.

All 65 SuperShuttle passenger vans, 180 airport taxis, and 24 interterminal buses run on CNG. There are 173 natural gas maintenance and support operations vehicles (pickup trucks and Crown Victoria sedans), and 25 gasoline pickups will soon be replaced with dedicated CNG F-150s. There are 4 Ford Ranger electric vehicles, plus 53 other pieces of support equipment that run on propane (carts, manlifts, and forklifts).

Clark County School District

How do Las Vegas casinos and some of the country's largest hotels benefit the Clark County School District? (This is not a trick question.) These establishments produce vast quantities of waste grease—about 6 gallons per resident per year—which is used to make biodiesel (B20) for the district's school bus fleet. Of its 1,186 full-size school buses, about 1,100 run on B20 (roughly 86 buses in outlying areas still run on diesel because B20 is not readily available). Haycock Petroleum and Biodiesel Industries supply B20 to the district.

The district has demonstrated extraordinary leadership in implementing this alternative fuel in its fleet. It consumed 1,587,818 gallons of B20 in 2002, and will consume about 3 million gallons in 2003. The district converted 1 bus yard at a time to biodiesel, and learned some important lessons. For example, the tanks need to be well cleaned before the switch to prevent bacteria, and the consistency of the fuel should be maintained as closely as possible.

The school district has a large fleet of diesel maintenance trucks that now run on B20. The water district and city fleets are also looking at the school district as an example, and the Nellis Air Force Base is considering the possibility of testing B20 in some of its equipment.

Rockland Materials

For the past 3 years, Rockland Materials in Phoenix, Arizona, has operated more than 100 heavy-duty ready mix trucks and aggregate haulers on biodiesel—often in a blend as high as B100, which has displaced as much as 1.2 million gallons of diesel fuel annually. Grant Goodman, CEO and owner of Rockland Materials and Stirling Bridge, LLC, has promoted the value of alternative fuels for clean air in various venues. A recent article in the *Wall Street Journal* indicated his financial sacrifice to purchase the more expensive biodiesel, at $300,000 annually. He took the initiative, without public funds, to convert his entire fleet of trucks to operate on biodiesel. Although $0.50–$0.60 per gallon more expensive than conventional diesel, Goodman decided to absorb the additional expense because "it was the right thing to do." Rockland Materials is now the largest biodiesel user in the country, and the first private company in the nation to completely replace diesel fuel use with nontoxic soybean fuel. The switchover has significantly reduced hydrocarbon and carcinogen emissions.

Salt Lake City Department of Airports – Salt Lake City International Airport

The Salt Lake City International Airport is in a nonattainment area for particulate matter. Since 1992 it has supported its Clean Fuel Program by striving to reach its two main goals: (1) reduce airport vehicle emissions by using clean fuels (per the Clean Air Act Amendments of 1990), and (2) voluntarily address local, national, and energy security concerns using EPAct alternative fuels.

The airport has 16 CNG 35-passenger parking shuttle buses (which run 500,000 miles each year); 77 light-duty CNG and 3 light-duty propane vehicles. In total, this fleet reduces regulated emissions output by 10,000 pounds per year. In 2000, with funding from DOE and the Salt Lake City Corporation, Department of Airports, Questar Energy Services, 4Utah Energy Office, Utah LP Gas, and Utah Hotel & Lodging Association, the airport installed a multi-alternative fuels fueling site, open 24 hours per day for airport and private AFV operators. The airport offers any private ground shuttle company a $2,500 credit to drive an AFV on airport property and use the passenger pickup restricted access lane. Currently 17 companies and 27 individual AFVs are enrolled. On average, a privately owned airport transportation shuttle will travel nearly 100,000 miles annually.

CNG is the airport's preferred alternative fuel. Its use has increased from 42,000 gallons in 1999 to 166,000 gallons in 2001 and 175,000 gallons in 2002. The fleet is mostly light duty, but in 2001 it added 2 CNG-fueled bobtail dump trucks and Utah's first CNG-fueled trash truck. Additionally, all diesel-fueled airport equipment now runs on B20. This voluntary action resulted in approximately 30,000 gallons of B100 being used in 2002, which has earned the airport nearly 80 AFV credits.

Delhi India CNG Program—The Fastest Growing CNG Program in the World

At least 23 cities in India have populations of 1 million or more, and some are among the world's most polluted urban areas. Most affected is Delhi, a city of 14 million, where airborne particulate matter has been gauged at levels of more than 10 times India's legal limit. The vehicle population—more than 3 million cars, trucks, buses, taxis, two wheelers, and three-wheel rickshaws—is growing as rapidly as the city's human population, and accounts for most of the pollution.

Delhi has taken bold steps to curb air pollution. The city banned vehicles more than 15 years old, and it now enforces Euro II emission standards created for the European Union. India's Supreme Court in 1998 ordered all public transport vehicles in Delhi to be fueled by natural gas—an order that only in the last three years has been seriously implemented. With such an aggressive mandate, many organizations, such as Centre for Science and Environment, Delhi Transport Corporation, Indraprastha Gas Limited, and manufacturers Ashok Leyland, Bajaj (for rickshaws), Maruti and Hindustan Motors, and Tata Engineering, are responsible for the CNG program's success. And today Delhi can boast about its 60,000 CNG vehicles, including 7,000 buses, traveling the streets and using its more than 100 CNG stations.

Delhi's strong support of air quality and alternative fuel initiatives has brought progress and growing pains to the city. To help with some remaining issues, DOE's Clean Cities International Program, in partnership with the National Energy Technology Laboratory and the United States Agency for International Development (USAID), will support train-the-trainer programs in autogas (propane) and natural gas vehicles and stations, Clean Cities coalition development, and other technical assistance. To leverage the anticipated USAID funding, and to help develop export opportunities for the U.S. alternative fuels industry, U.S. companies such as IMPCO Technologies, OPW, and Clean Fueling Technologies, have become key stakeholders. Furthermore, the Delhi Transport Minister and officials of the Society of Indian Automobile Manufacturers have expressed significant interest in joining Clean Cities International. Other activities include a January 2003, DOE-sponsored train-the-trainer program for technicians, employing trainers from the West Virginia University's National Alternative Fuels Training Consortium.

Steps have been taken to improve traffic management and air quality. New flyovers have been opened, fuel quality has improved (Delhi now has less than 300 ppm sulfur content diesel), and heavy transport through the city during the day has been banned. Clean Cities International recognizes that much work has been done to build a progressive and successful CNG program that the world can look to with pride.

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